WHAT IS CLAIMED IS:

1.   An integrated circuit structure for selecting data for service by a shared network resource, wherein the data is supplied from a plurality of network users, said integrated circuit structure comprising:

a circuit module implementing a plurality of scheduling schemes; and

a selector for selecting one of the plurality of scheduling schemes for controlling the servicing of the data by the network resource.

2.   The integrated circuit structure of claim 1 wherein each user is assigned to a service class, and wherein the scheduler causes the network resource to service data from each service class in accordance with the selected scheduling scheme.

3.   The integrated circuit structure of claim 2 wherein each user within a service class is assigned a priority within the service class, and wherein the scheduler causes the network resource to service data from each user in accordance with the priority of the user within the service class.

4.   The integrated circuit structure of claim 1 wherein the network resource further comprises at least one data queue for each user for storing data received from the user, and wherein the network resource services data from each user by reading data from the at least one data queue of the user in accordance with the selected scheduling scheme.

5.   The integrated circuit structure of claim 4 further comprising two data queues for each user, wherein a first data queue is a pending queue where incoming data packets are stored, and wherein a second data queue is an active queue from which data is serviced by the network resource.

6.   The integrated circuit structure of claim 1 wherein the data is in the form of data packets.

7.   The integrated circuit structure of claim 1 wherein the selector is manually operable for selecting one of the scheduling schemes.

8.   The integrated circuit structure of claim 1 wherein the selector is operable in accordance with the type of data presented by the plurality of service classes.

9.   An apparatus for selecting data from a plurality of network users for service by a shared network resource, wherein each network user is assigned to a priority class, and wherein the scheduling scheme for selecting the data for servicing by the network resource is selectable from among a plurality of scheduling schemes, said apparatus comprising:

a controller for receiving a signal indicating the selected scheduling scheme;

a plurality of scheduling blocks each processing data from a respective priority class and providing an eligible queue output signal in response to data awaiting service from the respective priority class; and

a class selector for determining the data to be serviced in response to the eligible queue output signal from each one of said plurality of scheduling blocks and further in response to the selected scheduling scheme.

10.   The apparatus of claim 9 wherein the apparatus is incorporated in an integrated circuit.

11.   The apparatus of claim 9 wherein the data from the plurality of network users of each class is provided on one of a first and a second queue, and wherein the selected scheduling scheme determines whether said first queue or both said first and said second queues are processed by each one of the plurality of scheduling blocks.

12.   The apparatus of claim 11 wherein the first queue is an active queue and wherein the second queue is a pending queue, and wherein data is stored in the pending queue while the network resource services the data in the active queue.

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13. The apparatus of claim 9 wherein each one of the plurality of scheduling blocks implements a smooth deficit weighted round robin scheduling scheme.

14. The apparatus of claim 9 wherein the plurality of scheduling schemes comprise strict priority, bandwidth limited strict priority and strict priority plus smooth deficit weighted round robin.

15. For a shared network resource receiving data from a plurality of subscriber classes each comprising a plurality of subscribers, a method for implementing a user-selectable scheduling scheme, from among a plurality of available scheduling schemes, for controlling processing of the data received by the network resource, comprising:

determining the user-selected scheduling scheme; and

if a first scheduling scheme is selected, processing received data from subscribers of the plurality of subscriber classes according to a predetermined priority order for each subscriber class; and

if a second scheduling scheme is selected, first processing received data from subscribers within at least the highest priority subscriber class, then processing received data from subscribers within the remaining subscriber classes according to a round robin scheduling scheme.

16. A scheduler for selecting data for service by a shared network resource, wherein data is received at the shared network resource from a plurality of network users, said scheduler comprising:

a first module comprising a plurality of scheduling schemes; and

a selector for selecting one of the plurality of scheduling schemes to control access to the shared network resource.

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